

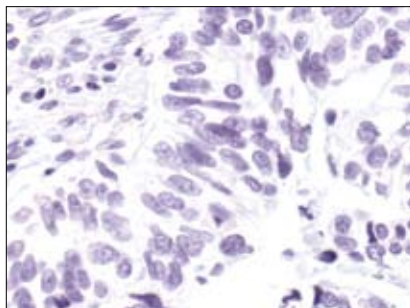
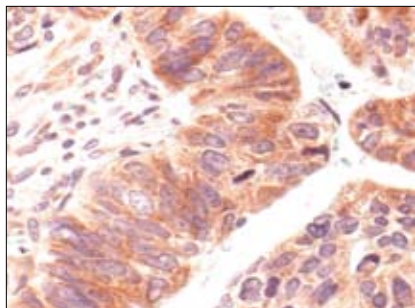
# S6 Ribosomal Protein Blocking Peptide

✓ 100 µg  
(100 sections)

rev. 06/05/07

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This product is for *in vitro* research use only and is not intended for use in humans or animals.



Immunohistochemical analysis of paraffin-embedded human lung carcinoma, using S6 Ribosomal Protein (5G10) Rabbit mAb #2217 preincubated with an irrelevant control peptide (left), or with S6 Ribosomal Protein Blocking Peptide (right).

**Background:** To effectively promote growth and cell division in a sustained manner, growth factors and mitogens must up-regulate translation (1,2). Growth factors and mitogens induce the activation of p70 S6 kinase, which in turn phosphorylates the S6 ribosomal protein. Phosphorylation of S6 ribosomal protein correlates with an increase in translation, particularly of mRNAs with an oligopyrimidine tract in their 5' untranslated regions (2). This group of mRNAs (5'TOP) encodes proteins involved in cell cycle progression and proteins that are part of the translational machinery, such as ribosomal proteins and elongation factors (2,3). The main *in vivo* S6 ribosomal protein phosphorylation sites, including Ser235, Ser236, Ser240 and Ser244, are located within a small 19 amino acid region in the S6 carboxy terminus (4,5).

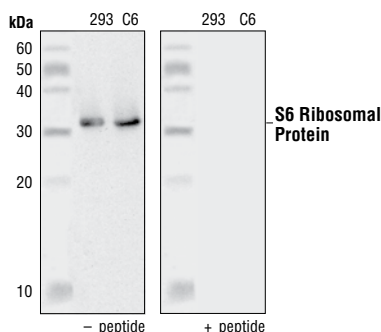
**Description:** This peptide is used to block S6 Ribosomal Protein (5G10) Rabbit mAb # 2217 reactivity.

**Quality Control:** The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks S6 Ribosomal Protein (5G10) Rabbit mAb # 2217 signal completely in both immunohistochemistry and Western blotting.

**Directions for Use:** For immunohistochemistry, add twice the volume of peptide as volume of antibody used in 100 µl total volume. Incubate for a minimum of 30 minutes prior to adding the entire volume to the slide. Recommended antibody dilutions can be found on the relevant product data sheet.

For Western immunoblotting, add 10 µl of antibody and 10 µl of blocking peptide to 10 ml of antibody dilution buffer, and incubate at room temperature for 30 minutes before allowing to react with the blot.

**Applications:** Use as a blocking reagent to evaluate the specificity of antibody reactivity in Western immunoblotting and immunohistochemistry protocols.



Western blot analysis of extracts from 293 and C6 cells, using S6 Ribosomal Protein (5G10) Rabbit mAb # 2217 (left) or the same antibody preincubated with S6 Ribosomal Protein Blocking Peptide (right).

**Storage:** Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA and 5% glycerol. Store at -20°C.

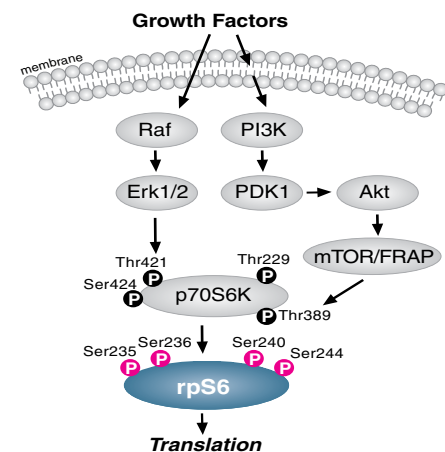
**Companion Products:**

- S6 Ribosomal Protein (5G10) Rabbit mAb #2217
- Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
- Anti-rabbit IgG, HRP-linked Antibody #7074
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- Biotinylated Protein Ladder Detection Pack #7727
- 20X LumiGLO® Reagent and 20X Peroxide #7003

**Background References:**

- (1) Dufner, A. and Thomas, G. (1999) *Exp. Cell Res.* 253, 100–109.
- (2) Peterson, R.T. and Schreiber, S.L. (1998) *Curr. Biol.* 8, R248–R250.
- (3) Jefferies, H.B. et al. (1997) *EMBO J.* 16, 3693–3704.
- (4) Ferrari, S. et al. (1991) *J. Biol. Chem.* 266, 22770–22775.
- (5) Flotow, H. and Thomas, G. (1992) *J. Biol. Chem.* 267, 3074–3078.

**IMPORTANT:** For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.



**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry IC—Immunocytochemistry IF—Immunofluorescence  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken X—Xenopus  
Species enclosed in parentheses are predicted to react based on 100% sequence homology.

F—Flow cytometry E—ELISA D—DELFIATM  
Z—zebra fish B—bovine All—all species expected